

Amendment Under 37 CFR § 1.116 Remarks and Arguments

Independent claims 1, 8, and 14 remain in this application. Dependent claims 2-7 and 9-13 remain in this application. Dependent claims 15 and 16 have been added.

The Examiner rejected claims 1-14 under 35 U.S.C. § 103(a) as being unpatentable over Asao, U.S. Patent No. 6,244,877 and Donley, U.S. Patent No. 4,268,713. The Examiner rejected claims 8-13 under 35 U.S.C. § 102(b) as being anticipated by Asao. The rejections are respectfully overcome by the applicant's amendments and for the reasons discussed below.

Independent claims 1 and 14 claim a face seal above the insulator block. Asao only discloses only an epoxy resin block (12). There is not any face seal above the insulator block (12).

The Examiner admits that Asao does not specifically disclose a face seal above the insulator block. (Detailed Action beginning at the penultimate line of Page 2). However, the Examiner maintains that it is obvious to provide Asao with a separate face seal above the insulator block (12) is a series of non-sequiturs.

Firstly the Examiner points out that Asao teaches that the insulator block is made of epoxy resin citing column 5, lines 34-38 of the Asao patent specification. This citation reads as follows:

An oblong rectangular parallelepiped shaped resin block is manufactured by using a suitable resin molding material *having insulating and heat resistance properties, for example, epoxy resin.* (Emphasis added).

The Examiner then jumps to the conclusion that top of the Asao insulator block (12) acts as a seal citing column 5, lines 10-13 of the Donley patent as follows:

Asao however does teach that the insulator block (Fig.1 element 12) is made of epoxy resin (column 5, lines 10-13) which is both an insulator and a sealant material as taught by Donley (column 5, lines 10-13), therefore the top acts as a seal.

Donley (column 5, lines 10-13) reads as follows:

A potting material, such as an epoxy resin, is poured into the cavity in surrounding relationship with the circuit board and internal portion of the ground strap, so as to provide a positive weather proof seal for the electrical components, as well as means for securing the mounting strap to the housing.

Epoxy resins are a group of synthetic resins that adhere to smooth surfaces and resist weather and chemicals. See the attached definition from Grant & Hackh's Chemical Dictionary.

Donley does not disclose, teach or suggest a face seal or the fact that the top of the either the Donley insulating compound (54) or the Asao block (12) acts as a seal.

Donley discloses an epoxy resin poured into a cavity of a housing for potting electrical components in an insulating compound (54) because the epoxy resin adheres to smooth surfaces and resists weather and chemicals. Asao also discloses an epoxy resin poured into a cavity for potting electrical components. More specifically Asao pours or injects epoxy resin into a mold cavity to insert mold the connection terminals (13) in a resin block (12) to produce the connection block (11) shown in figure 2 of the Asao patent or the connection block (31) shown in figure 3 of the Asao patent.

Even though neither Donley nor Asao teach or suggest a face seal, the Examiner, holds that it is obvious to make the Asao resin block (12) in two pieces to make replacement of the face seal easier and citing in re Dulberg.

It is not obvious to make the Asao resin block (12) in two pieces. As indicated above the purpose of the Asao resin block (12) is to produce either the connection block (11) or the connection block (31) with the insert molded connection terminals (13). Molding the resin block (12) in two pieces would be counter-productive. Moreover it is not obvious to make replacement of a non-existing face seal easy. Consequently molding the Asao resin block (12) in two pieces is not obvious. Furthermore, in re Dulberg is no longer precedent.

The use of per se rules, while undoubtedly less laborious than a searching comparison of the claimed invention – including all its limitations – with the teachings of the prior art flouts section 103 and the fundamental case law applying it. In re Ochiai, 71 F.3d, 1565, 37 USPQ2d 1127 (Fed Cir. 1995)

Independent claims 1 and 14 also claim the face seal compressed between the top surface of the insulator block and the lower surface of the upper housing. Neither Asao nor Donley show an insulator block compressing a face seal. Additionally, Asao and Donley do not disclose *any* compression of a face seal.

Claims 6, 12, and 14 claim the upper housing being attached to the insulator block. Although Asao shows connector housing (5) *touching* resin block (12), Asao does not disclose or suggest attaching the connector housing (5) to the resin block (12). As discussed in paragraph [0012] of the patent application, applicant's upper housing (12) is preferably attached to the insulator block (22) so that the face seal (34) is compressed between the top surface (28) of insulator block (22) and a lower surface of upper housing (38). In contrast, Asao does not attach the connector housing (5) to the insulator block (12) and does not need to attach the connector housing (5) to the insulator block (12) because Asao does not have any face seal to compress between these two members. Applicant's upper housing (18) is also attached to lower housing (12). See paragraph [0012] of the patent application and claim 14.

Claims 15 and 16 have been added and claim the insulator block further including lateral extensions and the upper housing being attached to the lateral extensions. Again, neither Asao nor Donley disclose an upper housing attached to an insulator block, nor do they disclose an insulator block having lateral extensions for attaching the upper housing to the insulator block.

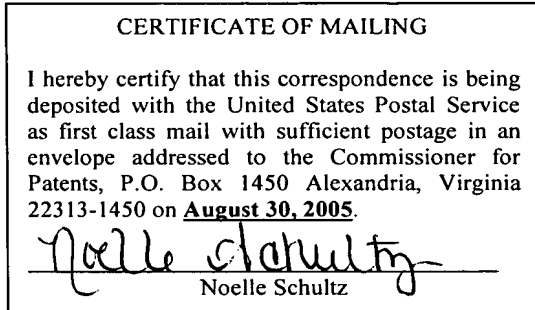
Independent claims 8 and 14 have been amended and claim terminals extending through the insulator block, having contact heads extending from and above a top surface of the insulator block, and having connector tails extending from and below a bottom surface of the insulator block. Asao and Donley do not disclose such terminals. Asao discloses terminals extending from a top surface of a resin block and out a side surface of the resin block. This defeats the purpose of providing a space beneath the upper housing for attaching electrical and/or electronic components to the circuit board adjacent the insulator block as stated in dependent claim 8.

For the foregoing reasons, claims 1 - 16 are in allowable form and should be allowed, which allowance is respectfully solicited.

Please enter the amendment under the provisions of 37 CFR § 1.116. The amendments were not made earlier because the Asao patent was applied in the Final Office Action for the first time.


Appl. No. 10/757,226
August 30, 2005
Reply to Office Action of June 30, 2005

If it is determined that any fees are due, the Commissioner is hereby authorized and respectfully requested to charge such fees to our Deposit Account No. 50-0852. A duplicate copy of this sheet is enclosed.



Respectfully submitted,

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GRANT & HACKH'S CHEMICAL DICTIONARY

[*American, International, European and British Usage*]

*Containing the Words Generally Used in Chemistry,
and Many of the Terms Used in the Related
Sciences of Physics, Medicine, Engineering,
Biology, Pharmacy, Astrophysics,
Agriculture, Mineralogy, etc.*

Based on Recent Scientific Literature

FIFTH EDITION

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epimerides Epimers. Isomers differing only in the arrangement of H and OH on the lowest-numbered asymmetric C atom of a chain; as, D-glucose and D-mannose.

epimers Epimerides.

epimino* Alternative name for the imino bridge group $-NH-$.

epinephrine $C_6H_3(OH)_2 \cdot CHOH \cdot CH_2NHMe = 183.2$. (R)-1-(3,4-Dihydroxyphenyl)-2-methylaminoethanol. Adrenaline (U.K. usage), suprarrenaline, Adrenaline. White powder, m.205, slightly soluble in water. A neurotransmitter and hormone produced from the adrenal medulla. E. increases glycogenolysis to produce glucose for energy, stimulates the heart, causes a rise in blood pressure and a relaxation of muscle in the trachea and bronchi. Used for severe allergic states and asthma. Often used as the tartrate (USP, BP). Cf. **norepinephrine bitartrate**. e. bitartrate $C_9H_{13}O_3N \cdot C_4H_6O_6 = 333.30$. Adrenaline bitartrate, suprenin. Gray crystals, darkening on exposure, m.149, soluble in water; a sympathomimetic (USP, EP, BP).

epinine $(HO)_2C_6H_3(CH_2)_2NHMe = 167.1$. 3,4-Dihydroxyphenylethylamine. Colorless crystals; synthetic substitute for epinephrine.

epiphenylin $O \cdot CH_2 \cdot CHCH_2OPh = 150.2$. Glycidyl phenyl

ether, 2,3-epoxy-1-phenoxypropane*. Colorless liquid, $b_{22mm} 131$; a solvent for varnishes.

epiphyte An organism living on, but not feeding on, another organism, e.g., orchid.

epipolic Fluorescent.

epispaetic Vesicant.

episperm The membrane between the shell and kernel of a seed.

epistilbite $Ca_2Al_4Si_{11}O_{30}$. Colorless monoclinics, d.2.24-2.36, hardness 3.5-4.

epitaxy The growth of oriented single crystals on the surface of a single crystal; as from the liquid phase (lpe) or vapor phase (vpe).

epithelium Layer(s) of cells that cover the body surface and line body cavities, organs, and glands. See **carcinoma**.

epithio* The bridge $-S-$.

epithioximino* The bridge $-S \cdot O \cdot NH-$.

epm Abbreviation for equivalents per million = parts per million per equivalent weight in mg.

e.p.n.s. Abbreviation for electroplate on nickel-silver.

Epontol Trademark for propanidid.

epoxide Oxirane. A product of epoxidation. E. have many uses in plastics (see **epoxy resins**), plasticizers and drugs.

epoxy* Indicating an $-O-$ bridge in a molecule attached to different C atoms, which may or may not be otherwise united. e.imino* The bridge $-O \cdot NH-$. e.nitrilo* The bridge $-O \cdot N-$. e.propanol 2,3-Epoxy-1-propanol*. e. resins A group of synthetic resins containing the group $(-O \cdot C_6H_4 \cdot CMe_2 \cdot C_6H_4 \cdot O \cdot CH_2 \cdot CH(OH)CH_2-)_n$, where n is 0 to 9. They adhere to smooth surfaces, and resist weather and chemicals. e.thio* The bridge $-O \cdot S-$.

EPR Trademark for ethylenepropylene rubber, which has the special qualities of resistance to heat and oxidation.

epsilon ϵ , E. Greek letter. ϵ (italic) is symbol for (1) emissivity; (2) epi-position; (3) linear strain; (4) molar (linear) absorption coefficient; (5) permittivity. ϵ -acid 1-Naphthylamine-3,8-disulfonic acid.

epsomite $MgSO_4$. Colorless, rhombic prisms, d.1.7, hardness 2.

Epsom salts Magnesium sulfate.

EPTC* See **herbicides**, Table 42 on p. 281.

epuration The purification of sugary liquors by defecation, etc.

epuré A bituminous constructional mixture from Trinidad.

eqn Abbreviation for equation.

Equanil Trademark for meproamate.

equation (1) A symbolical expression of equality. (2) An expression of a chemical reaction. The formulas of the reacting substances are placed on the left, those of the reaction products on the right, with the equality sign between. This indicates that the total number of atoms of each kind on each side balance. The molecular equation $2NaOH + H_2SO_4 = Na_2SO_4 + 2H_2O$ states that 2 molecules of sodium hydroxide and one molecule of sulfuric acid give one molecule of sodium sulfate and 2 molecules of water.

analytical \sim An e. showing the decomposition of a compound into simpler constituents. See **analysis**. **balanced** \sim An e. where the 2 sides are in some state of equilibrium.

Indicated by $=$ rather than \rightleftharpoons . **ionic** \sim An e. expressed in terms of ions as, $2OH^- + 2H^+ = 2H_2O$. **metathetical** \sim An e. expressing a metathesis. **molecular** \sim An e. expressed in terms of molecules. Many molecular equations can be expressed in ionic form (see above). **numeric** \sim A mathematical e., each term of which is dimensionless.

transmutation \sim An e. which indicates the disintegration or synthesis of elements. Thus, $[H + {}^1_3B \rightarrow 3{}^4_2He]$ means that element no. 5 (boron, at. wt. 11) is bombarded by a proton (element no. 1, hydrogen, weight 1) and forms 3 atoms of element 2 (helium, weight 4). The sum of the atomic numbers (prefixed subscripts), and also the sum of the mass numbers (prefixed superscripts), is the same on both sides.

e. of state A group of mathematical expressions derived from the equation $pV = RT$, which define the physical conditions of a homogeneous liquid or gaseous system by relating concentration or volume, pressure, and thermodynamic temperature for a given mass of substance. See **Ramsay-Young equation**, **van der Waals' equation**, **Dieterici's rule**, and **Clausius equation**.

equilibrium A condition in which contending forces are balanced. Cf. **triple point**. **chemical** \sim The balanced state reached when chemical reaction apparently stops; decomposition and recombination proceed with equal speed. See **mass action**. **disturbed** \sim The result of the removal of one or more reaction products or reacting substances from a chemical e., causing it to shift. **heterogeneous** \sim A chemical e. between 2 (or more) phases. **homogeneous** \sim A chemical e. in a single phase. **invariant** \sim An e. in which the quantity of one component approaches zero. **ionic** \sim An e. that involves a balanced condition of ions. **kinetic** \sim The balanced state of 2 opposite reactions. Cf. **static equilibrium** (below). **molecular** \sim An e. in which the components are molecules. **monophase** \sim Homogeneous e. **polyphase** \sim Heterogeneous e. **stable** \sim A mobile condition which, after a casual displacement, is again restored. **static** \sim The equilibrium attained when all reaction ceases.

e. constant Dissociation constant.

equilin $C_{18}H_{20}O_2 = 268.4$. 3-Hydroxy-17-oxoestratetraene. An estrogenic hormone produced from pregnant mares' urine.

equipartition (1) The orderly arrangement of atoms, e.g., in a crystal. (2) The condition of molecules in a gas, where the molecules keep the same average distance apart under the same pressure. **e. of energy** The total energy of a molecule is divided equally among its different degrees of freedom. **equisetic acid** 1,2,3-Propenetricarboxylic acid*.

Equisetum A genus of herbaceous, spore-producing plants (horsetail, scouring rush, bottlebrush) which are rich in silica.

equiv. Abbreviation for equivalent.

equivalence The relative combining powers of a set of atoms or radicals. **e. point** Stoichiometric point. The point of a

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